

**IKN**  
INTEGRATED **KINETIC** NEUROLOGY

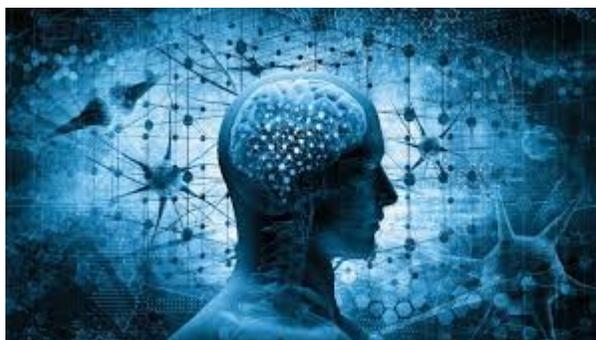


## **The Integrated Kinetic Neurology Approach**

Integrated Kinetic Neurology utilizes practical neuroscience to mobilize the nervous system on multiple levels to facilitate positive change in pain and performance. IKN was born out of an understanding that there is no singular approach to help everyone. If there was, nobody out there would be suffering from pain or stress-related conditions, or issues that may be impacting sports performance. We understand that every modality has its strong points, but also has its drawbacks. IKN gives you tools to address many levels of the human nervous system and other core systems to create an environment to facilitate positive change in pain and performance.

It is important to note that this is not a standalone approach. We have designed this approach to allow those with little understanding of neurology to immediately learn how to harness this system and easily combine it with their current model. Again, every approach has its strong points, but also has drawbacks. The most efficient way to help our clients is to integrate and address as many levels of the nervous system and body as possible to facilitate positive change. Our primary aim is to supply our nervous system with as much accurate information as possible, and enhance the processing of this input. The beauty of our system is that it can be easily integrated with your current approach to address deeper levels of the brain and body pertaining to a clients' complaints. Additionally, by creating a fully integrated state through the sensory systems, we can achieve more optimal output in the form of enhanced movement efficiency, pain reduction/elimination, strength, power, flexibility and so on. Taking a reductionist view of the body slows down this process. We need to evolve our approaches to one that considers the full body and other organ systems as opposed to only viewing segmented body parts.

Our approach will teach you how to create the most optimal environment to facilitate positive change at the beginning of your sessions or classes which can result in remarkable changes in pain and performance. Then, we will move onto a full assessment of all the sensory systems in the body and discuss their influence over our entire body and how disturbances can cause issues in many areas. We will present you with many neurological stimulation drills to integrate these systems and combine them with your current approach, as well as learning neuro-balance drills to create safety within the brain and body. Integrating these components together can result in incredible changes for our clients, but most importantly, empower them with the ability to reproduce the effects at home to achieve long lasting change. This is the key that allows our clients to continue to adapt to their environment and remain resilient to stressors they may have in the future.



### **Why would you want to integrate a neurology approach into your practice?**

As a therapist, trainer, or general mover, we must consider that there is a hierarchy of order in terms of how the body functions. Our Central Nervous System is seen as the “governor” that controls and organizes all the systems throughout the body. How often do we address or take this into account when dealing with a client with a “common” knee problem or an athlete dealing with an unknown drop in performance? All of you are experts in addressing the musculoskeletal system and possess many fantastic techniques to mobilize joints, loosen up tight muscles, and improve movement patterns with a whole host of drills. However, we must ask ourselves the question, “why is said muscle tight in the first



place, or perhaps why is this person suffering from pain when they have great mobility and strength?” A large contributing factor may be the influence of the Central Nervous System and its ability to dictate your function, strength, movement etc. Your ability to produce complex and precise movements as a human being is dependent on quality information gathered through your senses from your internal and external environment. If you are not feeding your brain rich and novel information, it is less likely to allow you to move freely in your environment with accuracy and precision.

Have you ever had your hamstrings stretched by a therapist or trainer using a simple contract-relax technique? Your leg is taken to the point of stretch and you are asked to push into the therapist’s hand for a couple of seconds. Then, once you relax, you find that you can magically gain another couple of degrees of range of motion. Was this rapid change a product of the musculoskeletal system or the neurological system? Actually, it’s both. When you apply pressure into the therapists or trainers hand, you are stimulating specialized “receptors’ or “motion sensors” in your hamstring that send feedback to your brain about the position of your leg. With this feedback, you are essentially showing your brain that you have control over this range of motion, and so it grants you another few degrees of motion. In essence, you made the brain feel safe, and when the brain feels safe it will grant you more flexibility. Eliciting safety within the nervous system using the IKN approach also brings about big changes in strength, movement quality, pain reduction/elimination, stress reduction and so on.

This change mentioned above was primarily achieved through your neurological and proprioceptive system. This proprioceptive system gives your brain feedback about the position of your body in space through the stimulation of “sensors” located throughout the body. This is the primary level that we as therapists & trainers work through with our clients to achieve change. However, these changes can be short lived as there are multiple levels of the neurological system that contribute to our experience of



pain, reduction in performance or other stress related conditions. We will briefly touch on these other sensory systems later in this guide to give you an understanding of how they may be contributing factors to our clients' current complaint. It is our belief at IKN that the more levels of our nervous system and body that we can integrate simultaneously in a specific sequence, the deeper and more rapid the change we can achieve. When we start to separate these systems (which we see a lot in modern healthcare), our clients' rehab process may become much slower.

Remember, when a client enters our office/gym with pain in a certain area, there's a human being with other systems at play that are connected to that body part. Consider the potential for their pain to impact all other areas of their lifestyle, and so there may always be an emotional aspect to their pain. At the end of the day, nobody goes to therapy for a pain or other issues. They go because of the way those issues make them feel. We may not always know where to go, but if we address as many levels of their health as we can, we can help them regenerate resources that the nervous system can use to self-organize. This creates the most optimal environment so that you can then go a little bit deeper, using your own specialized techniques. By giving them back resources, you're improving their ability to adapt to the changes you make. By making things simple, you're improving their ability to reinforce the changes outside of your clinic in different environments where things become uncertain. This empowerment factor is of huge importance to us at IKN, and one that helps create long lasting change in our clients.

## **What is Neurology?**

In order to move and adapt to our environment, we need to receive accurate information through our senses to execute efficient movement patterns. Neurology is the study of how we receive this

information, interpret it, and produce an output based on this interpretation. This interpretation is based on two main principles:

1. Survival
2. Movement

Humans are wired for survival. We are constantly scanning our environment for threats to increase our chances of survival. If we interpret a threat, we will MOVE AWAY from the threat to achieve safety.

Think about the common example of placing your hand on a hot stove. Your brain will receive “danger” signals from the sensors in the hand, interpret it as something that may threaten your survival, and produce movement away from the danger. We see these movement compensations all the time, but they are produced in response to danger to keep us safe. It means that we are functioning well!

However, while these compensations are very helpful in the short term, they can be quite destructive later down the road.

***“if your client was crying, would you just treat their eyes?”***

It requires extra neural energy to execute these compensations, which means that we have less energy for the function of other systems in the body. These can then leave us more susceptible to perceiving something as threatening in our environment, when in fact it’s not threatening at all. Think about those individuals who are stressed or have got a lot on their plate. They can become extremely reactive even with the smallest input. Also, we have surely heard about or experienced more pain ourselves when we are in more of a stressed state. Perhaps old injuries may begin to crop up when we are in those un-resourceful states. It’s not purely because we have issues in the area where we perceive the pain, but because we don’t have the neural energy to manage that incoming information while we are being bombarded with so much information from other angles. This is unfortunately a big issue in modern life,

and further reflects the need for us to become equipped with tools to address many levels of our neurology.



To clarify, we are designed to receive information from our external and internal environment, interpret that information (does this information threaten my survival?), and produce an output based that interpretation. The problem with today's world however, is that we are no longer being chased or threatened by tigers or other dangerous animals. Threats can come about in the form of past injuries, surgeries, work stress, poor nutrition, the list goes on. The key then lies in our ability to address as many levels as possible to give our nervous system back neural energy to self-organize. When this is combined with our current approaches, we can facilitate rapid change in pain and performance.

This whole concept of neural energy and resourcefulness is an interesting one, as we can then step back and consider how this relates to our interventions or exercises. Are we really fixing people with our techniques? Or just giving them back the resources to take care of this issue themselves. At the end of the day, we are designed to heal ourselves. If you scrape your knee, our systems go to work to take care of the problem. All we can do is deliver a stimulus, step back, and see how the client responds. Everybody hurts, but not everybody keeps on hurting. The same goes for performance issues. Sometimes we can see a drop in our performance due to factors that may be outside of our control, but

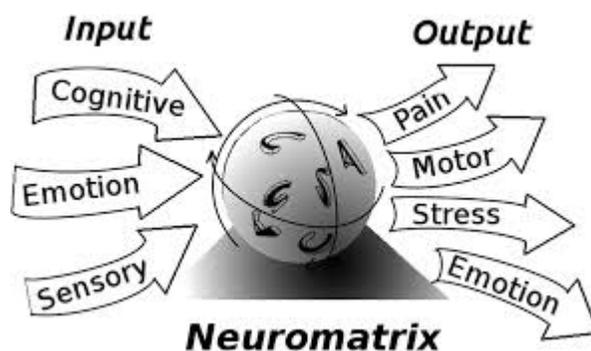
we shouldn't see a consistent drop. Do we have the ability to identify the true cause? If we did, we would have a gold standard intervention for everyone, but we don't. The key lies in targeting as many levels of our nervous system and body as possible, and integrate this with our own approaches to create change.

## **Neurology of pain**

Pain is an output that is based on our perception of danger. This does not mean that pain "lives" in your brain. It is a complex interplay between the input from the body and the external environment, and how that input is modulated in the brain. If it is perceived as "dangerous," then the output of pain acts as a protective mechanism to trigger action or movement. This is a survival mechanism and it means that your body is functioning well. However, it is not very helpful when we continue to have these threat responses of pain, stiffness, or weakness months after an initial injury. Of course, if there is a clear mechanism of injury, then we need to ensure that the tissues in that area have time to heal. We can certainly benefit from our IKN system by enhancing the recovery process through ensuring we have the appropriate resources to do so. But what happens when we continue to hurt without any evidence of biomechanical issues? Why in some cases do we see pain triggered with just the slightest movement of a limb, again without any evidence of structural changes? On the other end, why do we also see individuals with evidence of structural changes without any complaints of pain?

These examples further reinforce the idea that we do not truly know what is going on when pain becomes persistent. The modern understanding amongst pain scientists is both that the tissues in the area of previous injury are "sensitized," meaning that the smallest movement may be enough input to make the brain feel threatened, and so it produces pain as a protective mechanism. Also, it could be due to the activation of a particular network of brain cells that are associated with threat. So, everything may

be hunky dory in our body, but for some reason our brain interprets this information as dangerous. This would be a problem in the processing phase through an IKN perspective. We do not have the resources to be able to manage this input, and so we produce pain to protect us.



With our IKN approach, we address these pain and performance complaints by targeting many different systems simultaneously utilizing a blend of hands-on techniques (that we teach you how to self-perform and instruct to your training or therapy clients) and applied neurological techniques. Additionally, we use many other specific drills and movement patterns to create this sense of integration in the brain and body to lessen the chances of a pain output. The key is integrating as many systems simultaneously to achieve this state of connection and doing so in simple manner so that it can be reproduced by the client at home. Again, the more we separate body parts or systems, taking a reductionist view, the slower we respond. On an IKN course, you will learn simple assessments as well as treatments that you can take away and use immediately in your clinic or gym setting. This is not a course where you will learn a lot of information without the ability to apply it clinically. Our goal is to give you as many tools as possible to integrate with your current approach over the course of 2-days that you can apply the very next day.



## Testimonials for therapists

IKN is a multifaceted approach to therapy, which can enrich the lives of patients and clients, so they can reach new levels of success and empowerment. Too much of current healthcare and therapy is focused on labeling symptoms with a damaging and discouraging diagnosis. IKN is completely individualized to help each and every patient or client that walks into the door. Not one singular approach works for all, and IKN provides the tools on how to thoroughly assess each everyone in their unique way. IKN has completely changed how I provide healthcare to my patients and clients

***-Dr. Joe Palumbo PT, DPT, SFMA***

Highly recommended course! I developed an understanding of a significant amount of immediately applicable techniques/systems that can be used across most all age groups and clinical scenarios. I've used the IKN approach in my current setting and have already obtained remarkable results. I firmly believe that the power of the IKN approach will make it the future of both physical medicine and emotional well-being.

***-Dr. James McMullen PT, DPT***

Dr. Foley and Dr. Paxton sought to make inherently complex concepts as digestible as possible and succeeded massively. What the team at IKN has done is combine many modern approaches to treating pain and performance issues, while turning them into a cohesive system. I appreciated that the IKN approach didn't force me to only do things exactly how they do, but allowed me to take what I learned, intuitively use it in different ways, and immediately start seeing better results day 1 after the course. Combining the integrated kinetic neurology approach to bringing safety to the nervous system with the other treatment approaches I was already using has quickly changed my practice and I look forward to using it to empower my clients.



***-Dr. Samuel Hodous PT, DPT***

I would highly recommend this course! I was sick of waiting weeks to get results with my patients and was looking for ways to speed the process. This course provided me with some progressive new techniques taking a whole-body approach to give me instant change with my patients. I have been using these techniques on my pediatric, geriatric, and active population, and it has been an excellent addition to my skillset. These techniques are where rehab is heading, so be ahead of the game and get your hands on them!

***-Dr. Larissa Sabatose PT, DPT, DN***

As a physical therapist and strength and conditioning coach, I deal with a lot of athletes who always get injured but who are also looking for techniques to get them to the next level. That was the main reason I took this course! I used the IKN drills with a client who had back pain in the bottom of his deadlift and we did the techniques right before and he had ZERO pain for the first time in a few weeks. The amazing part for me was that he added another 20 pounds onto his lift during that same session. I can't wait to keep using this stuff for myself and my clients!!

***-Diane Jenkins PT, CSCS***

Dr. Paxton and Dr. Foley are truly ahead of the rehab/performance realm with progressive techniques and a multifactorial approach that produces immediate changes. They teach you how to empower your patients using the IKN process and how easy it is to use whole brain integration to get HUGE changes.

***-Dr. Louie Eres PT, DPT***